

## NEW CATALOGUE CREATES FLOODS OF ORDERS

We have just completed despatching the first batch of 60,000 of our catalogues and your response to them has been fantastic. We've been receiving over 5000 letters a day, tens of thousands of orders and since each requires our usual careful attention, a small backlog has built up. We doubled our staff in anticipation of increased orders, but even this has not been sufficient. We are all working very hard to get back to our usual same day service doing as much overtime as we possibly can to try not to let you down too badly. We are still taking on more staff in our effort to catch up and we hope we will soon have the situation under control again.

We have also suffered recently from the lorry drivers' strike and the bad road conditions. This has resulted in our stock levels being lower than usual. Many imported items due in early January are only now just arriving from the docks, but by the time you read this our stock levels should be getting back to normal.

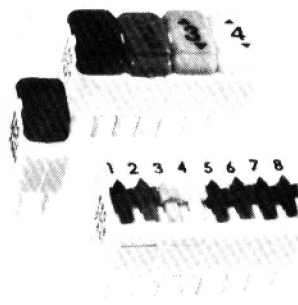
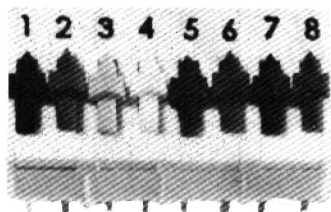
Our telephone sales desk is also very busy and we are very short staffed between 4.30 p.m. and 5.30 p.m. so if possible please try to call us between 9 a.m. and 4.30 p.m. If you should find all nine of our lines engaged please try again after a few minutes.



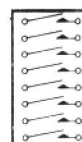
*Part of the invoicing and small-order packaging*

### DUAL-IN-LINE SWITCHES

Sub-miniature switches in dual-in-line packages for on-board switching. Pin spacing 0.3in by 0.1in. Packages may be butted end to end to make longer switch banks. Available in single pole make and single pole changeover styles.



Four types are available:  
SPST Dual Price 59p (incl. 4½p VAT)  
SPST Octal Price £1.79 (incl. 13½p VAT)



SPDT Single Price 59p (incl. 4½p VAT)  
SPDT Quad Price £1.79 (incl. 13½p VAT)



#### Ratings

100V AC or DC at 1A. Max 10VA.  
Contact resistance: 8mΩ.  
Bounce: <100µs typical.  
Contacts are brass, nickel-plated then gold-plated.  
Positive click switching.  
Life: 100,000 operations typical.

#### Dimensions

Width: 10.6mm.  
Height: 8.2mm (plus 5mm long pins).  
Length: Single/Dual 5mm,  
Quad/Octal 20mm.

7109 A/D Converter	Page 3
Breadboard Decks	Page 2
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Order As XX26D (DIL Switch SPST Dual)  
XX27E (DIL Switch SPST Octal)  
XX28F (DIL Switch SPDT Single)  
XX29G (DIL Switch SPDT Quad)

# Letters to the Editor

## White 'Ferric Chloride' Best

Dear Sir,  
What is the difference between a "log." and a "lin." potentiometer? Whatever you put in your ferric chloride? what I have seen before has been white, far more efficient and it has not gone "rusty".

Yours sincerely,  
P. C. Brien,  
St. Albans, Herts.

A lin or linear potentiometer has a resistance change that moves in a linear fashion as the pot is turned, i.e. at a quarter turn the resistance will be a quarter of the total resistance; when turned half-way the resistance will be half the total resistance and so on. A log or logarithmic potentiometer has a resistance change that moves in a logarithmic fashion as the pot is turned, i.e. at a quarter-turn the resistance will be only about three hundredths of the total resistance; when turned half-way the resistance will be about a tenth of the total resistance; when turned three-quarters of the way round the resistance will have risen to about half the final resistance and then over the final quarter turn it moves quickly through half the total resistance until the total resistance value is reached at the end. The most common use for the log pot is in volume controls, because the human ear reacts to loudness in a logarithmic fashion. Thus as the log pot turns the volume up, the ear thinks it hears the volume increasing in a linear fashion. The etching crystals we supply are pure ferric chloride. The white powder you have seen is probably magnesium persulphate which is used industrially as an etchant, but really needs a high temperature or a mercury catalyst to work efficiently. You will find ferric chloride works more efficiently if you use warm water, but be careful - always wear goggles when adding the ferric chloride. If the water is too hot the solution may spit.

## Synthesiser Needs Calibrating

Dear Sir,  
Could you please print this in your next newsletter. Having just finished constructing the 4600 synthesiser, I am in desperate need of someone living in the Manchester/Stockport area with knowledge and calibration equipment for the 4600 synthesiser, who would, for a suitable fee — calibrate mine.

Yours faithfully,  
P. Lewis  
50 Acres Lane, Stalybridge,  
Cheshire

## Organ Cabinet

Dear Editor,  
I read with great interest your February 78 newsletter containing the article on the cabinet for the organ.  
I am sure your readers and I will be interested in any developments since then as you stated Nov. to be the earliest a start could be made. Have you got a better idea of publication date for the cabinet as it is an important addition to such an excellent organ.

Yours sincerely,  
J. S. Carlsbrough,  
Whitchurch, Devon.

We have now started to give some thought to a cabinet for our modular organs, but it will take some time before it reaches prototype stage, let alone ready for sale. It may well be that we shall not be able to make it modular (i.e. expandable as the organ expands), if we are to make it look attractive. Our initial thoughts lean towards our having two basic cabinets one for those wishing to end up with an organ having a 32-note pedalboard and one for those wishing to end up with an organ having a 13-note pedalboard.

## Catalogue Falls To Pieces

Dear Sir,  
I have received both 77/78 and 79/80 catalogues and am extremely pleased with both of them. The technical data is worth the price alone. My only criticism is that both these catalogues arrived with torn covers and a large number of pages fallen out. I would be prepared to pay extra for better binding and packaging.

Yours faithfully  
Mark Fenwick  
Devizes, Wilts.

We have had about a hundred catalogues returned to us because we sent two in error to one address, or the address was wrong etc., and although they have all been right through the postal system twice, not one of them has torn covers or pages falling out. We have sent you another copy and hope the Post Office are kinder with this one.

## Disco Problems

Dear Sir,  
Having built your "100W Stereo Disco" (MES 41) I have met with some reliability problems. Could you please advise me on how to rectify these faults.  
When driving into 4Ω speaker systems (rated at 320W), the output fuses blow. Even when running at volume which does not blow them, the amps (power transistor heatsinks) heat up in excess of 240°C and after about three-quarters of an hour the power transistors blow (I have blown 1 set this way).  
For test purposes, the output fuses were upgraded to 5A. (Wilmslow Audio give output fuse ratings as:

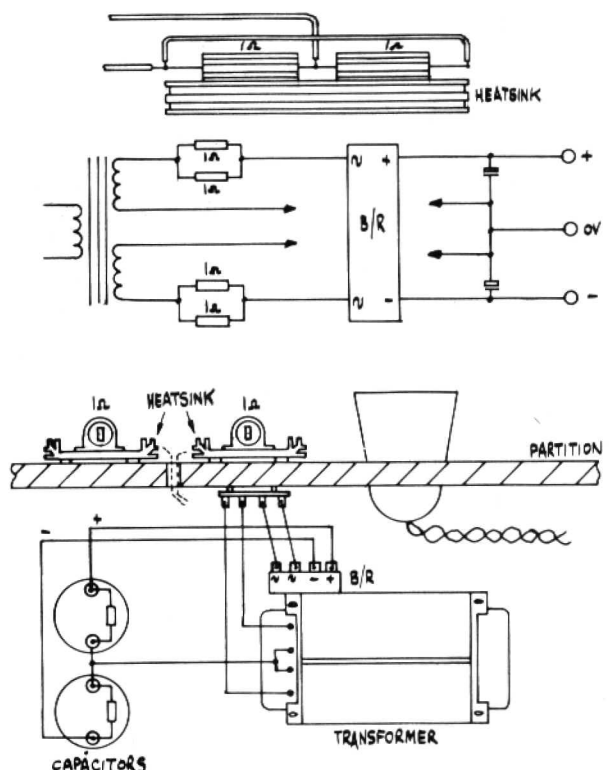
$$I = \frac{1}{2} \sqrt{\frac{3W}{Z}}$$

where W = speaker power Z = speaker impedance).

## Modification To Disco Power Supply

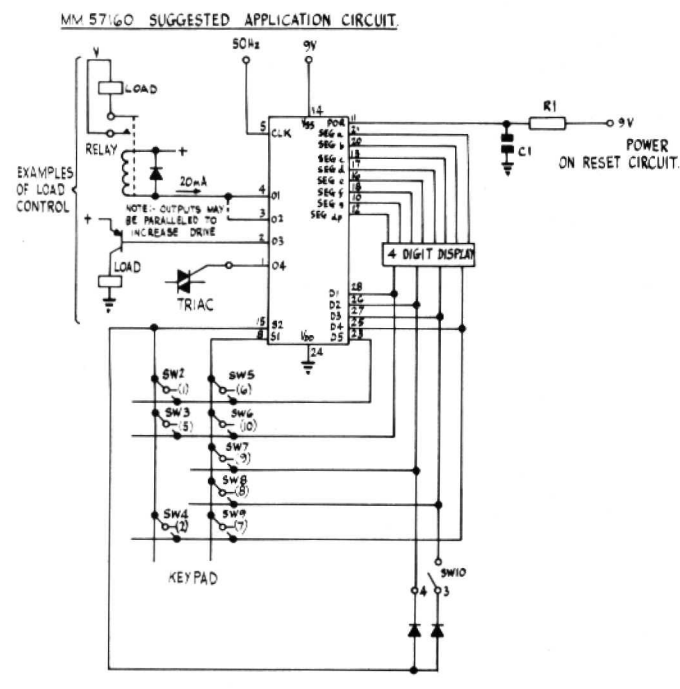
You will need the following parts:—  
4 25W W/W 1Ω (P1R)  
2 Heatsink 4Y (FL41U)  
1 4-Way Tag (FL28F)  
18 Self-Tapper No.4 ½in. (2 pks of BF66W)  
8 Spacer 4BA ½in. (1 pk of FW30H)  
1m Wire 3202 (XR34AM)

Mount two resistors per heatsink and fix the two heatsinks on spacers inside the section with the lamps. Move the bridge rectifier to the other side of the transformer and mount the 4-way tag strip close to it on the base of the cabinet. Drill a hole through the partition for the four wires to pass through. Remove the two wires from transformer to bridge rectifier and reconnect them to the tag strip. Continue from those points with the wire 3202 to the centre of the two resistors, one wire to one heatsink and one to the other. The centre of the two resistors should be linked. Also link together the far ends of the two resistors and connect a wire from there on each heatsink separately back to the two spare tags on the tag strip. The connect one of those tags to one of the tags marked ~ on the bridge rectifier and the other tag to the other tag marked ~ on the bridge rectifier. No other wires are altered.



## MM57160 STAC TIMER

The diagram below was omitted from our last news letter. Our apologies for the error. The remainder of the details are now available in the reprint of our January news letter. See page 7 for details of how to order.



## AMENDMENTS TO PROJECTS

### Burglar Alarm

In the parts list for the ultrasonic detector and in the component schedule (MES47B) we have shown C9 as Axial 10μF 25V. It should be Ceramic 10pF. Also R16 is shown as Min Res 1k. It should be Min Res 2k2.

### Train Controller

In the parts list and in the component schedule (MES46B) we have shown C2 as Axial 100μF 25V. It should be Axial 1000μF 25V.

### 8W Amp Kit PCB

The 8W Amp PCB (BY73Q) has component designations printed on it. Please note that C3 should be inserted in the position marked C5 and vice versa, and R2 should be inserted in the position marked R3 and vice versa.

# Letters to the Editor

## Catalogue Late Again

Dear Sir or Madam,  
This letter concerns the advertising and distribution of your 1979/80 catalogue. Firstly I wish to comment on the initial advertising. I am on your mailing list and hence receive your newsletter every so often, which, incidentally, seems to be becoming somewhat repetitive of late. In the September edition, I noticed an item concerning the new catalogue which said "Just put your name and address on one of the reply-paid post cards you'll find in the electronics" magazines dated October 1978..." One problem, I do not take an electronics magazine regularly since I am not an electronics enthusiast as such, and certainly did not intend to purchase one specifically for one of your postcards, would it not have been a better idea to enclose one of those post cards with the newsletter — in addition to those in the magazines — when it was sent to all those who are on the mailing list? Fortunately, a friend who takes a number of magazines was able to furnish me with one. However, my point still stands.  
Secondly, a footnote to that article suggests that one should enquire if one has not received a catalogue by the 19th January 1979. It is now the 22nd, and I still have not received one. Surely it is of little worth advertising your catalogue now if you cannot supply to those who ordered (as encouraged) in September/October 1978?  
I hope that perhaps you may be able to remedy this unfortunate situation as soon as possible.

Yours faithfully,  
M. C. Tombs  
Poynton, Cheshire

We did anticipate starting to despatch the catalogue by the 8th of January, but owing to last minute problems with the binding we were unable to start despatching until the 22nd. All orders received by the 16th were ready by the 26th, but the Post Office did not collect the last sackfuls until the 30th. Even after that not all the catalogues left Southend sorting office until the 6th of February. This was actually not the Post Office's fault, but a combination of the train drivers' strikes and the bad road conditions.  
We are naturally very sad that the catalogue was late (the earlier it comes out, the earlier we start selling from it), but from the time we give it to the printers (late October) we really have very little control over it.

## Magnificent Catalogue

Dear Ed.,  
I would like to extend my thanks and congratulations to you and those concerned in creating your new catalogue. I think it is magnificent in every respect, worth at least twice its price. The newsletter/price list is much easier to handle too.  
Keep up the brilliant work, I remain one of your most satisfied customers.

Yours  
R. Elliot  
London, W12

## Improvements To Catalogue

Dear Sir,  
NEW CATALOGUE  
In response to your request for views on the new catalogue, whilst I feel that it is in some ways better than the old one — and I do not feel that the colour pages are needed or are very useful — there are some points not so good.  
In particular I am disappointed that you do not print many circuit diagrams of the 'insides' of integrated circuits. Another thing you should, I think, do is to give the name of the manufacturer, particularly of standard items such as resistances and condensers, and also of diodes, transistors and the like.  
There also seem to be some errors besides those you have pointed out in the news sheet, e.g. on page 206 the LM3900 is shown as on table 45 page 233. There seem no tables beyond 43 and the IC is not on page 233.  
I hope these notes may help you to produce an even better catalogue next time.  
Yours faithfully,  
R. B. Rowson  
Cardiff

We don't name the manufacturers of the 'standard' items we sell because we don't stick to one manufacturer. This helps to considerably reduce prices and enables us to be better in stock than would otherwise be the case.  
You're absolutely right about the LM3900, we've missed out the data for it altogether. It will be included, however, along with lots of the 'inside' circuits of IC's in our 'Semiconductor Data Book' due to be published late Summer this year.

## Magnetic Moments

Dear Ed.,  
First of all, many congratulations on your new catalogue. Well worth waiting for. However, I feel I must point out one mistake which has escaped your scrutiny. It is hardly the biggest boob since Watergate, but just for the record, it occurs on page 249. The last line on the left-hand column should read:  
"(Note 1mT = 1mWb/m<sup>2</sup> = 10 Gauss)".  
Hope it doesn't get the compiler the sack!  
Yours faithfully,  
Dan Solomon  
Manchester

We thought somebody would gauss the truth.

## Nice Sounding Distortion Please!

Dear Sir,  
First of all, thank you for your quick and efficient service, as ordering from your firm is often a lot easier than queuing for half an hour in the local electronics shop. However, a few suggestions for items you do not stock unless they are in your new "catalogue to end all catalogues".

(1) Heavy duty screened noiseless cable. Your Twin Mic cable is reasonable, but something that can be stamped on, have quarter tone bass speaker cabinets dropped on it and still survive, would be very welcome. I have paid over £5 for 7 metres of rubber noiseless cable with a decent pair of jack plugs attached, surely, with your bulk buying powers, you could sell the stuff at a price which would have groups all over the country buying it from you.  
(2) Your design engineers seem very competent at their work, would it be possible to design a real, decent sounding fuzz box, capable of giving a valve sound. Most electronics magazines have produced several designs, but all seem to be a high gain amplifier with a pair of back to back diodes on the end to clip the signal. This is all very well, but the odd order harmonics are the only ones that get through, and having built many of these designs, I'm still not happy with the sound.

Good distortion starts life as second harmonic distortion, which I believe C.M.O.S. chips tend to suffer from. If you could produce a circuit that made my guitar sound like that of Brian May, or Robin Trower, without half a dozen valve amps, I, and a few other guitarists would be ever grateful. (Apologies though to the Hi Fi people who spend all their time eliminating distortion).

Thanks again for the service and I hope to receive your new catalogue soon.

Yours faithfully,  
S. P. Lewis  
Allestree, Derby.

Both your suggestions are very interesting and we shall see what can be done.

## Charge Postage Separately

Dear Editor,  
I have received your new 1979/80 catalogue. I am pleased to say that the catalogue is extremely good and is the best catalogue I have ever come across.  
The prices in your catalogue are postage and packing inclusive which means that we have to pay for postage and packing for every component separately. Don't you think it is a good idea, therefore, to exclude these postage charges from the prices quoted and, say, charge 50p for every order, excepting heavy goods, of course. Many other mail-order firms have adopted this idea. I am sure many people will be for it.

Yours faithfully,  
S. R. Patel  
London, NW6

We include postage in our prices for two reasons. Firstly because it makes our prices fairer — the price you see is the price you pay. Other companies' prices may sometimes seem cheaper than ours, but by the time you have added postage and packing, they are often more expensive. Secondly it is fairer for those buying small components. They pay less postage than if we just charged a blanket 50p.  
In fact, of course, you don't pay post and packing for every component separately, otherwise resistors would cost about 12p each. The postage included is calculated as a percentage of what it would cost to send £2 worth of that item. Over this amount you pay slightly more for postage than it actually costs. This is offset by our discount vouchers. Also at higher weights postage costs do not double for double the weight so we are able to give double vouchers over £6 to counteract this effect.

## 4600 Synthesiser For Sale

Dear Sir,  
I have recently finished building the International 4600 synthesiser, which includes long spring line and two different filters — one of them is of the original design, the other, the 3600 version — and the construction includes the luxury of sockets for all IC's. The unit was set up by a very competent engineer and I am more than pleased by its clear sound and performance.  
However, circumstances force me to part with it, therefore I would like to ask you to publish this letter in your news sheet.  
The price is £850 — and anybody interested should write to:

Paul Juhasz  
13 Eltham Road  
Streatham Common  
London, SW16

Many thanks in anticipation

Yours Sincerely  
Paul Juhasz

At this price it sounds a real bargain for someone.

## That 2MHz Synth Problem

Dear Sir or Madam,  
Further to the letter of Mr. Philip L. Watson, published in your January newsletter, I have also experienced trouble similar to that described. The 2MHz ramp-wave was found on all supply rails and was traced to the current limiting circuitry of the power supply. These caused the oscillations only when about 90% or more of the synth modules were being powered. After many attempts to cure this, a rather crude method was employed: the replacement of the offending circuitry by fuses. This was shown to be satisfactory now the testing stage is over.  
Could you please indicate when you estimate the 5600S book to be available, and is there any possibility of wireable plugs (as supplied to the modular board) being supplied for the large patchboard?

Yours faithfully  
Chris I. F. Jordan  
Cambridge

We are pleased to advise that the power supply in the 5600S synthesiser is an improved version of that in the 4600 and does not suffer from this problem. The 5600S book should be available in April. Unfortunately we haven't considered plugs for the patchboards and regret that it is too late to change them now, though we agree, it would have been better.

## Styli, MES 53, & 40W Amp

Dear Editor,  
Let me say a few words on items of Catalogue, price list and so on.  
i. I find M. G. DAFT has troubles with ERRORS. My errors are generally put right in a short time of 7 days and has to travel over some 300 miles.  
ii. PAGE 163 CAT. MUSIC CENTRE CROSS REF. CHART (WALTHAM). You have reference to STM 3Q, 35, 45, BSR, ST16, 17DS, DD. What happened to STM15, T3MS was supplied with set. We can't get hold of this stylus anywhere. However I find TETRAD 51 is the nearest unless you can find one better. ST16 will not fit as point is not 90° to record.  
iii. As MES 53 is the first thing I have built and I have little or nothing in knowledge or test equipment for electronics, could you or someone advise me as to which meters in catalogue are needed to test and set up the 50W Amp. As to Power Supply, I can't see where pan Neon, KBPC 606 is fitted. Must I spend £10+ on this Power Supply or spend £5.69 on TR 28V 1½A. Is there any other way.  
I am very pleased with the catalogue which has been put together in such a way that you can find what you want at ease. As to your newsletter and price list, I would like you to keep it this way. I find it better to file away for reference.  
I wish to say many thanks to the staff of Maplin's for their services rendered and return of goods to order. Over some 300 miles 7 days is fine. Even with the rail strike I still managed to receive goods in 9 days at most.  
Many thanks.

Yours faithfully,  
S. Robinson  
Gateshead, Tyne & Wear

Any meter with a 20,000 ohms per volt DC rating or better will be satisfactory to set up the 50W amp. The pan neon should be connected across the primary of the transformer and the bridge KBPC606 — now renamed PW06 is connected in place of diodes D1 to 4. If you want 50W from the amp, then you must have a power supply as powerful as this one.

## Suggestions For New Lines

Dear Sir,  
Having seen the new catalogue together with price list, I must say I am very impressed by your extended range of items and particularly your new practise of giving every different item its own part number even when the difference may be only one of colour.  
May I suggest a few useful new items...  
(a) A.C. PCB Drill  
(b) Bulk demagnetiser — useful for demagnetising tools as well as tapes!  
(c) Rectangular versions of your "Magic-light Button", and finally, a very useful complete project —  
(d) Dolby B Noise Reduction Unit Project. Any tape machine's DB system is calibrated for one make and thickness of tape, by using a separate DB unit, noise reduction can be obtained from any tape by re-calibration of the DB unit; also three head machines, in the majority, do not 'compress' the DB signal on the 'monitor' output giving a false comparison between 'source' and 'off tape' signals. An additional DB unit solves this problem as well.

Yours faithfully,  
M. J. Breakspear  
Swindon, Wilts.

Thanks for your suggestions, we should be interested to hear if others would like to see us stock these items. As to the 'Dolby' system, there are now IC's available which make systems very easy to build. Unfortunately, they are only available to those companies licensed by 'Dolby'.

## 3800 Synthesiser Needed Quickly

Dear Ed.,  
I am a student at a comprehensive school and I am trying to get (amongst other things) an 'O' Level in music. A lot of the marks for the exam come from a topic of some sort to be prepared — sent in — and later discussed by the candidate with the examiner. I am preparing a topic on Electronic music and have for some time been building the 4600 synthesiser but, due to a lack of finances, have not got very far.  
It would, I think, greatly impress the examiner to see, and hear — an actual working synthesiser, it would also help me explain several points with more ease.  
There is no way that I can finish the 4600 for this summer term, it is far too complex and expensive. I may, however, be able to complete the 3800 synthesiser IF I HAD THE PLANS. All designs must be on paper, otherwise you would not have the unit photographed in the new catalogue. Please send the plans (and an estimate for the cost) of the 3800. It would be a great help.

Two more things.  
(1) I would like to point out to Mr Gregory that the minimum time he quoted for an order is incorrect, as several times I have posted a large order on a Wednesday afternoon and received the full order first post on Friday morning.  
(2) A firm are looking for distributors for the new 'Wonderboard' (featured in 'EE') How about it?  
Thanks for a good service.  
Yours sincerely,  
Name and address supplied

Whilst we would love to help you if we could, I very much regret that we cannot. Although the synthesiser in the catalogue works, the circuits on paper do not. They were modified as the unit was put together and tested and to attempt to build the unit from these sketches and uncorrected amendments would be a nightmare without the continuous assistance of the designer. We hope to have the construction details available in April, (they are included in the 5600S book) and we are hoping the cost will not rise much, if at all, above £300.

If you would like to air your views about anything to do with electronics, or ask us a question, or perhaps there's something you think another reader may be able to help you with — then write to 'The Editor', Maplin Electronic Supplies, P.O. Box 3, Rayleigh, Essex.  
Please do not enclose sae's as the editor cannot enter into personal correspondence, but will do his best to answer your questions if your letter is selected. All the letters are read by the directors even if they are not printed. We should like to thank all those people who write in praise of our service, we really do appreciate your having taken the time and trouble.  
Please try to keep your letters short and to the point, and please write neatly, our printers are going grey trying to typeset some of the letters: they are almost indecipherable.